Integrated Public Alert and Warning System

IPAWS – OPEN Developer Documentation

SIG Presentation

18 January 2012

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IPAWS-OPEN Status

▸ **IPAWS-OPEN 3.01 is operational in TDL and Production.**

▸ **IPAWS-OPEN 3.01 production live connection to NOAA is in place. (Use care if you have a NOAA approved COG.)**

▸ **CMAS distribution is in place.**

▸ **EAS is live.**

▸ **Need to get Operational MOAs and software in place for originators.**

(AND WE NOW HAVE THE DOCUMENTATION AND STABLE ENVIRONMENT THAT MAKES IT POSSIBLE!!!!!)
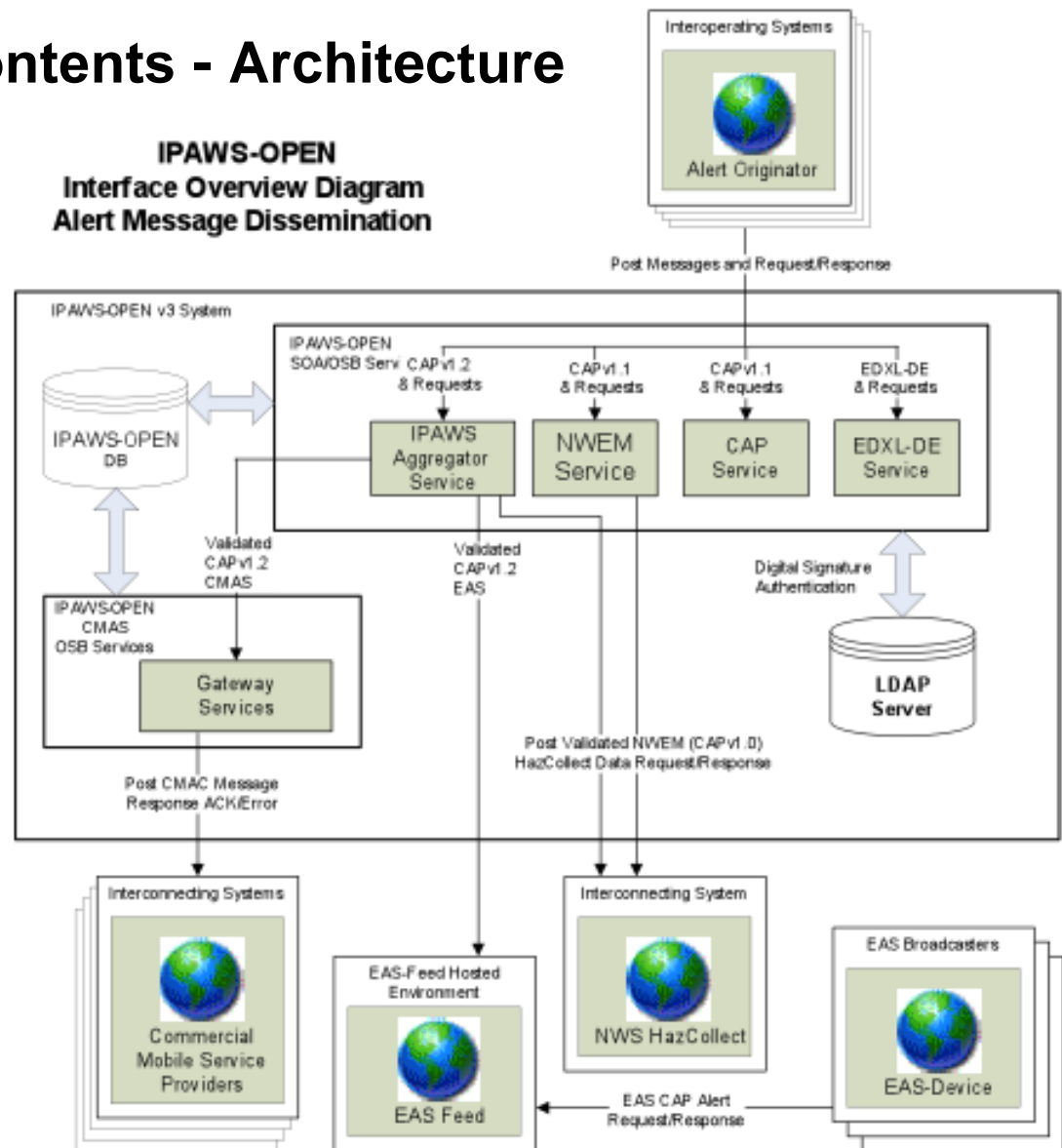
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Resources Available

- **IPAWS Web site (source of general information and all policy/governance matters):**
  - **http://www.fema.gov/emergency/ipaws/**

- **Guidance Documentation**
  - **Developer's Guide (also contains links to all implemented Standards Documents)**

- **Reference Applications**
  - **SOAP UI**
  - **SignXML.jar**
  - **CAP12PropertyHandler.jar**
  - **IC.Net - http://edxlsharp.codeplex.com/**

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Developer's Guide Contents - Introduction

▸ **How to get started admin steps**

▸ **Reference to external documents**
   – **EDXL-DE 1.0**
   – **CAP 1.1**
   – **CAP 1.2**
   – **CAP 1.2 IPAWS Profile**

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Developer's Guide Contents - Architecture

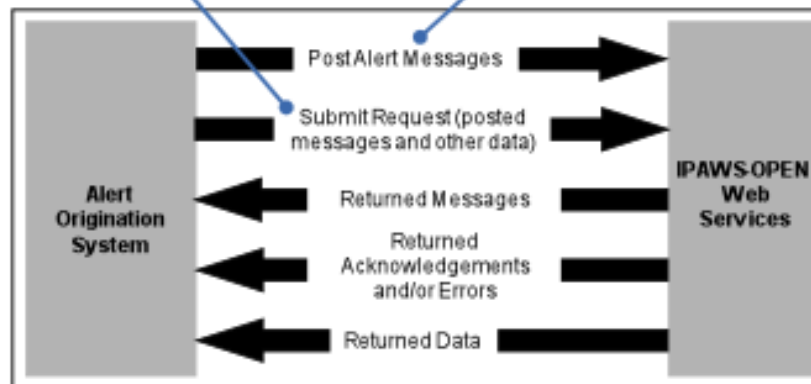

IPAWS-OPEN
Interface Overview Diagram
Alert Message Dissemination

Developer's Guide Contents - Message Summary

- Submit request to retrieve posted messages based on specified parameters.
- Submit request for other data:
  o All Web-Services: Message lists, COG list, Value lists, system acknowledgement, and server time.
  o NWEM Requests: HazCollect Server Mode, Auxiliary Data, and Authorized COG check.
  o Aggregator Request: Consolidated message processing status.

CAPv 1.1, NWEM, EDXL-DE and CAPv 1.2

Alert Origination System

Post Alert Messages

Submit Request (posted messages and other data)

Returned Messages

Returned Acknowledgements and/or Errors

Returned Data

IPAWS-OPEN Web Services

- Posted/Returned Messages based on posted message schema.
- Submitted Requests based on defined Request Schema.
- Returned Data responses based on defined Response Schema.
- Returned Acknowledgements and errors based on data structure defined in the Web-Service WSDL for CAPv 1.1, NWEM, and EDXL-DE.
- Returned Acknowledgements and errors based on defined Response Schema for Aggregator (CAPv 1.2) Service.

Developer's Guide Contents - Security

▸ **SOAP Level Signature Requirements**

▸ **SOAP Header Sample Signed Header**

▸ **CAP 1.2 Level Signature Requirements**

▸ **CAP 1.2 Message Example**

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Developer's Guide Contents – Request Message Structures

▸ **Identifies Name Spaces to be used in each service.**

▸ **Request and response examples for:**
  – **getAck**
  – **GetServerInfo**
  – **getCOG**
  – **getValueListUrn**
  – **isCogAuthorized**
  – **getHCSMode**
  – **getNWEMAuxData**

▸ **Allowable parameters and sample message queries for:**
  – **getMessage**
  – **getMessageList**

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Developer's Guide Contents – POST Message Examples

▶ **Legacy Post CAP 1.1**

  – **Post CAP**

  – **PostNWEM**

▶ **Post EDXL-DE**

▶ **Post CAP 1.2**

INCLUDES Examples, Descriptions, and a significant number of programmers notes (by element name).

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CAP 1.2 Aggregator Specifics – Posting Validation Path

▸ **CAP 1.2 Schema – 200+**

▸ **Core IPAWS Profile – 300+**

▸ **NWEM Specific – 400+**

▸ **EAS Specific – 500+**

▸ **CMAS Specific – 600+**

▸ **Multi-Channels Errors – 700+**

Note: Independent Parallel review through 400, 500 and 600 paths

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CAP 1.2 Aggregator Specifics – Rules and Examples

▸ **Authorization Checks:**

- **COG Enabled**

- **EAS Authorized**

- **CMAS Authorized**

- **CMAM Text Authorized**

- **CAE Authorized**

- **Allowed Event Codes**

- **Allowed Geocodes**

▸ **Sample of Digitally signed message**

▸ **Sample Post Response**

▸ **Sample getMessageStatus and Response including Gateway response**

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CAP 1.2 Aggregator Specifics – Tables and Topics (1 Of 2)

▸ **Alert Element Mapping to Dissemination Channels**

  – **Description of each CAP element mapped to applicable requirements for each Dissemination Channel.**

  – **Replaces The previous Draft CAP Construction Guide for IPAWS.**

▸ **Allowed values of Elements by Distribution Channel**

  – **<info><category**

  – **<info><responseType>**

  – **<info><eventCode> (with <valueName> equal SAME)**

▸ **Special rules for <area> and <geocode> by distribution Channel**

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CAP 1.2 Aggregator Specifics – Tables and Topics (2 Of 2)

▸ **Rules for use of the <resource> Element**

▸ **Rules for CMAM Text as a <parameter>**

▸ **The Formula for Generating CMAM Text without a <parameter>.**

▸ **Supplementary Information on the DOM Structure of the IPAWS Response Format**

▸ **Consolidated message response table – A listing of all response codes and their meanings.**

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Coming Features

▸ **CHANNELBLOCK**

  – **<parameter><parameterName> CHANNELBLOCK with <value> equal to channel to block (e.g. CMAS, EAS, NWEM, ????).**

  – **Workaround:**

    •**No <parameter> <parameterName> TimeZone -- Stops NWEM**

    •**<responseType>=None -- Stops CMAS**

    •**No <parameter><parameterName> EAS-ORG -- Stops EAS**

▸ **Better COG Info Features (particularly knowledge of permissions)**

▸ **Interface A and a truly Public Feed of Public Alerts**

▸ **Your requests?**

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Known Issues –

▸ **NWEM Structural Issue**

▸ **Multi-Parameter Query Issue**

▸ **The Error Response does not match the WSDL issue**

▸ **Yours?**

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Comments and Questions

▸ **IPAWS Website -** http://www.fema.gov/emergency/ipaws

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